

above four having been seen by Mr. Russell's party during ten days, though game of all other kinds was met with in great plenty; and the following year the same party killed only one. But towards the hills, as Mr. Russell was told by the natives of that part of the country, they may be met with in greater abundance. Of the habits of this animal little is known. Mr. Russell states that 'its flesh is white, and eats very much the same as that of the rabbit;' and from the circumstance of his never having succeeded in putting one up a second time, he is almost certain that it burrows. It is called by the natives of the country, where it was met with, by the same name that they give to the hare."

Mr. R. W. G. Frith, upon examining the Society's specimen, believes it to be the same animal so often described to him by sportsmen, who have on several occasions been shooting in the extensive sâl jungle in the district of Mymensing, called the Muddapore jungle, on the western or right bank of the Burram-pooter river; but he never chanced to meet with it himself, though he long ago called my attention to the existence of such an animal in that part.

It is included in Messrs. McClelland and Horsfield's list of the Mammalia of Assam, Proc. Zool. Soc. 1839, p. 152, but with the statement that the ears are "very short, not projecting beyond the fur," which is either a mistake, or another species is alluded to; though I believe the former to be the truth: Mr. McClelland remarking, "I am indebted to Lieut. Vetch of Assam for the skin of this animal, but unfortunately the skull is wanting. According to Mr. Pearson, however, it is the same as the skull of the common hare. It inhabits Assam, especially the northern parts of the valley along the Bootan Mountains." The differences of the skull from that of any *Lepus* have been already adverted to.

I propose that it should bear the generic name *Caprolagus*, and be accordingly styled *C. hispidus* (Pearson), nobis.

XXV.—*A Synopsis of the British Rubi.*

By CHARLES C. BABINGTON, M.A., F.L.S., F.G.S. &c.*

It is only of late years that the fruticose species of *Rubus* have received the attention which they deserve: botanists were long contented to call them all *R. fruticosus* or *R. cæsius*, and the introduction by Smith of another name (*R. corylifolius*) must have appeared to be a very great innovation. Each of these is a collective species, by which I mean, one in which many forms, doubt-

* Read before the Botanical Society of Edinburgh, Feb. 12, 1846.

less constituting truly distinct species, are included. Hence the great diversity in the mode of applying these names.

All students of this very difficult genus are extremely indebted to Weihe and Nees v. Esenbeck for the publication of their splendid work the '*Rubi Germanici*,' without which it would have been scarcely possible to attain that knowledge of Brambles which we now possess ; and all will agree, that for extending our acquaintance with British *Rubi* no name justly stands so high as that of Borrer, to whom we owe the elaborate account of these plants contained in Hooker's '*British Flora*' (ed. 2 and 3), and the descriptions of many species in the eminently beautiful but far too little known '*Supplement to English Botany*.' Dr. Lindley, in his '*Synopsis of the British Flora*' (ed. 1), gave the specific characters of twenty-three species, mostly translated avowedly from the work of Weihe and Nees, but including several supposed to be undescribed. He states that he had attained his knowledge of them from plants growing in the garden of the Horticultural Society, and that he was "satisfied that their distinctions are permanent and important." In his '*Flora of Shropshire*' Mr. Leighton has collected together the opinions of the above-mentioned botanists, and also of Nees v. Esenbeck, by sending a perfect set of specimens to each of them, accompanied by corresponding numbers. He has also described the plants with great accuracy, and thus placed students as nearly as possible in the same situation as himself. Without attempting to enumerate all those who are now studying *Rubi*, I cannot pass unnoticed the very valuable papers by Dr. T. Bell Salter in the '*Phytologist*' and '*Annals of Natural History*,' by which he has shown himself to be peculiarly qualified to become the illustrator of this genus. I had hoped that he would have undertaken such a review of it as that upon which I have now ventured ; this his professional duties prevent. I must take the present opportunity of acknowledging myself to be very greatly indebted to him, both for the gift of specimens and also for the communication of much valuable information.

To Mr. E. Lees, a gentleman who has long paid attention to these plants, I am indebted for a very extensive series of specimens. Many other botanists have liberally assisted me in a similar manner ; I would more especially mention the Rev. A. Bloxam and Mr. H. O. Stephens.

In the following pages I have endeavoured to apply those characters to the discrimination of the British species which have been found to be the most permanent by the best British and continental authorities, and would more especially refer the student to the following works in addition to those already noticed : the '*Flora Silesiæ*' of Wimmer and Grabowski (Breslaw, 1827) ;

'Novitiarum Floræ Sueciæ mantissa altera et tertia' of Fries (Upsala, 1839—1842); 'Monographia Ruborum Sueciæ' of Arrhenius (Upsala, 1840); and 'Monographie des Rubus de Nancy' of Godron (Nancy, 1843). It has also been my endeavour to ascertain what forms are to be considered as species and what only as varieties. Had views concerning species been adopted similar to those elucidated in the invaluable 'Rubi Germanici,' this synopsis would have contained sixty-three species at the least, and with every wish to reduce them as far as nature will allow, they still amount to about half that number. Several of these are now described for the first time; of them full descriptions are given; of the others the technical characters alone are introduced, accompanied by such notes and observations as appeared to be requisite.

In so large an assemblage of species it becomes necessary to attempt a separation into groups, but in this, as in all rich and natural genera, it is found to be nearly impossible to do so. Many species are easily referable to sections, such as those which I have adopted; but their artificial character is shown by other species which would belong to one section when young, and to another in their maturer state, or which possess characters so nearly intermediate, as to make it very difficult to decide in which section they should be placed. Still the divisions adopted in this essay have been found to be more constant and convenient than those derived from other peculiarities which are employed by some authors.

It is not pretended that all the forms are correctly referred to their true places, but simply that the information within my reach and the best judgement which I can form have been used in this attempt at their arrangement. Additional study will doubtless show that many alterations are requisite; will perhaps prove that some of those now considered as varieties are really specifically distinct, and demonstrate that several of my species may be combined with others. In those cases in which plants are described as new, every endeavour has been made to ascertain that they are not already published in the works of continental botanists; but the want of authentic specimens has added greatly to the difficulty of determining many of those species which are not represented in the 'Rubi Germanici,' and made it far from improbable that some of my names, and also those of Dr. Salter, will ultimately be superseded. It would appear that botanists generally are very little inclined to distribute authentic specimens of *Rubi*; indeed, when we consider the variable character of many species, and the trouble attending the preservation of sufficiently characteristic specimens of all, we can hardly wonder at their rarity. In my own case, from residing in a district far from rich

in brambles, most of my specimens have been collected during botanical tours, when it was scarcely possible to find space for the preservation of more than a very few specimens from each locality.

It is unnecessary to prolong these preliminary observations with remarks upon the value of characters, as the following descriptions will show upon what points it has appeared most desirable to place confidence; but it may be as well to state, that the form and armature of the matured barren shoot, the form of its leaves, the general form and structure of the panicle and its armature, and in some cases its foliage, and the direction of the calyx of the fruit, seem most deserving of attention. The shape of the petals, the colour of the styles, the form of the torus and of the primordial fruit, are points which will probably well repay a careful study; unfortunately my attention was not drawn to them until the opportunities for their examination had passed away. They are strongly recommended to the notice of botanists.

As it has been thought better not to encumber this paper with synonyms, only those references are given which appeared requisite for the more certain determination of the plants.

In conclusion, I must crave the indulgence of those who may honour this synopsis with their attention, and assure them that whatever errors they may find in it are not the result of carelessness, but caused by the paucity of our knowledge of plants which have been too generally neglected. It is hoped that by publishing the knowledge that they may obtain, all botanists will assist in perfecting our acquaintance with a genus, which more than most others requires a division of labour.

RUBUS, *Linn.*

Ordo naturalis ROSACEÆ.

Tribus DRYADEÆ.

Character genericus. Cal. quinquepartitus. Petala quinque. Stamina indefinita. Styli subterminales. Carpella indefinita, drupacea, supra torum protuberantem non carnosum collocata. Semen pendulum, prope basin styli affixum.

A. FRUTESCENTES.

* Caules erecti; folia pinnata.

1. *R. Idæus* (Linn. !); caule suberecto tereti pruinoso, aculeis setaceis rectis, foliis quinato-pinnatis ternatisve, floribus axillaribus terminalibusque corymbosis pendulis, fructibus lanuginosis.
R. Idæus, *Linn. Sp. Pl.* 706; *Eng. Bot.* 2442; *Rubi Germ.* t. 47.

Stems 4—8 feet high, downy, armed with setaceous straight declining purple, or on the white-fruited plant pale, prickles,

which vary greatly in number. Leaves pinnate, of two pairs and an odd leaflet, snowy-white beneath; terminal leaflet ovate or cordate with a long stalk, lateral ones ovate, nearly or quite sessile; on the flowering-shoots ternate. Fruit red or amber-coloured.

β. trifolius (Bell Salt. !); caule polito alto, aculeis paucis minimis rectis, foliis ternatis, foliolo terminali pedicellato, panicula laxa, fructibus sanguineis. *Ann. Nat. Hist.* xvi. 365.

γ. Leesii; caule tomentoso alto, aculeis paucis brevissimis purpureis, foliis ternatis, foliolis omnibus rotundato-ovatis subsessilibus lateralibus terminali incumbenibus, panicula fructuque ignotis.

R. Idæus c. *fragariæ-similis*, *Lees*! in *Lond. Cat. of Br. Plants* (name only).

In woods and hilly places. *γ*. In a wood near Ilford Bridges, three miles from Linton, Devonshire, *Mr. E. Lees*. June.

Obs. 1. Our *var. β.* is at least as large as the normal plant. Not so the trifoliate *var. microphyllus* (Wallr. Sched. Crit. 226), which is much smaller, has leaves of only half the size, and is branched from the base.

Obs. 2. Our *var. γ.* is a very curious plant, of which the barren stems alone were found. Its three leaflets being all nearly or quite sessile and very round, give it greatly the appearance of a distinct species. It is well deserving of the attention of botanists visiting the north of Devon.

** *Caules plerique suberecti; folia digitata vel subpinnata; panicula laxa.*

2. *R. suberectus* (Anders. !); caule suberecto anguloso, aculeis paucis minimis rectis subulatis, foliis quinatis septenatisve, foliolis flexibilibus; terminali cordato-ovato acuminato infimis subsessilibus, ramorum floriferorum basi attenuatis, panicula subsimplici, sepalis a fructu (atro-sanguineo) reflexis.

R. suberectus, *Anders. in Trans. Linn. Soc.* xi. 218. t. 16; *Eng. Bot.* 2572; *Sm. Eng. Fl.* ii. 406; *Arrhen. Rub. Suec.* 19.

Stems 3—4 feet high, nodding at the end, glabrous. Prickles enlarged suddenly at the base. Leaves green on both sides, paler beneath, pilose; on the flowering shoots ternate, all much narrowed to their base, terminal one scarcely emarginate below. Panicle usually unarmed, or with small hooked prickles. Torus conical.

β. trifolius (Bell Salt. !); caule polito, aculeis paucis, foliis ternatis, panicula elongata laxa simplici, "fructibus sanguineis." *Ann. Nat. Hist.* xvi. 365.

Boggy woods and heaths. July and August.

Obs. 1. The typical form of this plant cannot be confounded

with any of our other species. It has quite the habit of *R. Idaeus*; its leaves are usually septenate by the separation of two leaflets from the base of the middle leaflet, they are thin, flexible and slightly pilose or quite glabrous; the petioles and rachis bear a few short hooked prickles. The inflorescence is small, of a few solitary axillary flowers, and a small open terminal raceme. The floral leaves have all their leaflets narrowed to the base, not cordate.

Obs. 2. *R. fissus* (Lindl.) seems scarcely to differ from this species, except by having more numerous and scattered prickles, the calyx of the fruit erecto-patent, and the fruit "bright red." In Lindley's description of his *R. fastigiatus* (Syn. ed. 1. p. 91), which he declares to be *R. fissus* (Syn. ed. 2. p. 92), he describes the calyx as reflexed. It would thus seem either that he lays but little stress upon that character, or that, if it is of value, his *R. fissus* is not that of Leighton (Fl. Shrop. 225). The presence of "bright red" fruit in Bell Salter's *R. suberectus* β . *trifoliatus* shows that that cannot be depended upon as a certain distinction between *R. suberectus* and *R. fissus*.

Obs. 3. A garden specimen of *R. suberectus* in Smith's herbarium, which was given to him by Mr. Edw. Forster, is accompanied by the observation, "The plant was given to me by Geo. Anderson, and is therefore authentic. E. F." It is exactly our plant.

3. *R. plicatus* (W. et N.); caule suberecto anguloso, aculeis æqualibus parum deflexis in caulis angulis congestis, *foliis* quinatis *plicatis*, foliolo terminali cordato-ovato acuminato infimis subsessilibus, *ramorum floriferorum lateralibus rhombæo-ovatis basi dilatatis*, panícula subsimplici racemosa, sepalis a fructu (atro) reflexis. *R. plicatus*, *Rub. Germ.* 15. t. 1; *Eng. Bot. Suppl.* 2714. *R. fruticosus*, *Arrh. Rub. Succ.* 23.

Stems 3—4 feet high, glabrous. Prickles slender, dilated at the base. Leaves rarely 7-nate, green on both sides, paler beneath, pilose, unequally and acutely serrate; on the flowering shoot generally ternate, basal leaflets dilated below especially on one side where they are often lobed, terminal one narrowed to its rather emarginate base. Petioles with hooked prickles. Peduncles simple, elongated, patent; terminal flower nearly sessile. Bracts lanceolate.

- β . *carinatus* (Bell Salt. !); aculeis falcatis, foliolis omnibus elliptico-lanceolatis basi apiceque acutis carinatis subtus venis prominentibus, panícula simplici, pedunculis longissimis, "fructibus atrorubentibus." *Ann. Nat. Hist.* xvi. 365.

Stony but rather damp places in the north. Somewhat boggy

places in Sussex, *Mr. Borrer*. β . Burnt House, Isle of Wight, *Dr. Bell Salter*. July and August.

Obs. 1. Near the extremity of the barren shoots the prickles are more hooked, but as that part is usually dead and lost at the flowering season the prickles are then all nearly straight.

Obs. 2. The β . *carinatus* does not agree well with this species and may prove distinct. All its leaves, especially those of the flowering shoot, differ remarkably from those of the true *R. plicatus*, to which I refer many plants which would be named *R. suberectus* by numerous English botanists; the leaves of the flowering shoots combining with general habit to point out their true location.

Obs. 3. The *R. nitidus* from "Snelsmore Common near Newbury," gathered by Mr. Bicheno and preserved in Smith's herb., appears almost certainly to be *R. plicatus*; as are also the *R. suberectus* from Frant and from Ashdown Forest. *R. nessensis*, a cultivated specimen from Mr. J. Mackay, and one named *R. suberectus* by Smith from "Scotland, Mr. G. Don," are *R. plicatus*.

A German specimen named *R. plicatus* by Mr. Sonder of Hamburg is the same as our plant, to which also specimens named *R. suberectus* and *R. fastigiatus* by Dr. Weihe belong.

4. *R. fastigiatus* (W. et N. ?); *caule decurvo vel procumbente anguloso glabro, aculeis paucis rectis declinatis æqualibus in caulis angulis congestis, foliis quinato-digitatis planis, foliolo terminali cordato acuminato infimis subsessilibus intermediis incumbentibus, ramorum floriferorum lateralibus basi dilatatis, paniculæ subsimplicis foliosæ apice corymboso, sepalis a fructu reflexis.*

R. fastigiatus, Rub. Germ. 16. t. 2.?

Stems very long, but (I believe) not rooting. Prickles dilated at the base, distant. Leaves green on both sides, pilose above, paler and downy beneath, flexible, large, unequally dentate-serate. Petioles and midrib with strong hooked prickles. Panicle with few small straight declining prickles: floral leaves few simple cordate-ovate. Peduncles simple, elongate, ascending, downy with spreading hairs; lower ones distant axillary, upper corymbose; terminal peduncle much shorter than the others. Leaves of the flowering shoots ternate.

In dense woods at Jardine Hall in Dumfries-shire. August and September.

Obs. This plant so closely agrees with the figure and description of *R. fastigiatus* as given in the 'Rubi Germ.,' that it is considered better to retain that name for it. It differs chiefly by having its lower leaflets nearly sessile and overlapping the intermediate pair, and the almost exactly dentate margin of its leaves.

5. *R. nitidus* (W. et N.); *caule* suberecto anguloso *levi nitido*, *aculeis* conicis rectis declinatis basi dilatatis, *foliis* quinato-digitatis *planis* supra nitidis subtus viridibus pubescentibusque, *foliolo* terminali ovato rotundatove *infirmis pedicellatis intermediis dissitis*, *paniculae compositae foliosae* ramis patentibus divaricatisve: *rachi* polita superne pilosa.

R. nitidus, *Rub. Germ.* 19. t. 4.

Stem not arching, but producing a pendulous shoot in the autumn, glabrous or with a few scattered hairs. Terminal leaflet usually ovate; all sharply and irregularly serrate. Petioles with short, generally numerous, hooked prickles. Panicle very prickly, its branches usually spreading nearly at right angles to the rachis.

Hedges and thickets. July and August.

Obs. 1. "This plant is remarkable for the bright varnished appearance" of its stem, as well observed by Dr. T. B. Salter (*Phyt.* ii. 102). These stems are very frequently only suberect, but in some cases a slender pendulous shoot is produced which reaches the ground and roots. The flowering-shoots are nearly glabrous throughout the greater part of their length, but become gradually more and more covered with patent hairs as the extremity of the panicle is approached, between which the shining cuticle is seen.

Obs. 2. The panicle is here considerably different from that of all the preceding species. It is much more compound, irregular, and often rather close, nor do any of our specimens quite accord with the figure in '*Rub. Germ.*' of this part. A specimen from Dr. Weihe has a less prickly panicle than the English plant.

*** *Caules* arcuati vel procumbentes, *radicantes*, *nunquam asperi*, *setis nullis* (sæpe in *caulibus junioribus*, in *maturis rarius*, *veniuntur setæ sparsæ*). *Aculei* in *caulis angulis sæpissime congesti*, *subæquales*.

6. *R. Salteri* (n. sp.); *caule* procumbente anguloso sulcato parce piloso, *aculeis æqualibus parvis rectis declinatis*, *foliis* quinatis, *foliolis* ovalibus apiculatis pilosis subtus tomentosis, *infirmis breviter pedicellatis intermediis dissitis*, *paniculae angustae inferne foliosae* pubescentis ramis brevibus divaricatis simplicibus corymbosisve, *sepalis* fructui oblongo adpressis.

Stem long, decumbent, angular, striated, furrowed, green, with scattered short patent hairs; prickles few, moderately long from a thick base, straight, declining, nearly equal, confined to the angles of the stem, slightly pilose. Leaves quinate-pedate; stipules linear-lanceolate; petioles and midribs with a few small strong declining or deflexed prickles; leaflets strongly and doubly dentate-serrate in their upper half, the serratures simple and decreasing downwards; terminal leaflet oval, shortly pointed, sub-

cordate and slightly narrowed below; lateral obovate, pointed, narrowed below; basal oblong, not overlapping the lateral leaflets. Flowering-shoot long, pubescent with lax hairs; prickles few, moderate, deflexed; leaves ternate, green beneath; petioles and midribs with few small deflexed prickles; terminal leaflet obovate-oblong, rather abrupt, jagged at the end. Stipules linear-lanceolate. Panicle narrow, compound, pubescent with lax hairs, not setose; prickles few, short, slightly deflexed; two or three lower branches axillary from ternate or 3-lobed or simply ovate leaves, often elongated and patent; the other branches short and patent, simple or 2—3-flowered; terminal flower sessile; lower bracts foliaceous, upper ones trifid. Sepals woolly, ovate, closely embracing the oblong black fruit. Petals lanceolate, narrowed below.

Apse Castle Wood, Isle of Wight, *Dr. Bell Salter*. July and August.

Obs. 1. This is a very straggling plant, prostrate unless supported by the neighbouring bushes or much shaded by trees. It is remarkably distinct in appearance from all its allies.

Obs. 2. A plant found by the river-side above Cramond Bridge near Edinburgh probably belongs to the same species, but it has its terminal leaflets cordate-acute, a short panicle with fewer hairs and smaller and more numerous prickles, subquinate intermediate leaves, and stipules slightly more broadly ovate; its fruit and the direction of the calyx are unknown; its petals are shortly ovate and clawed. A plant submitted to Dr. Bell Salter from Bradbury Wood, Cheshire, by Mr. Sidebotham, he considers to be identical with the plant of Cramond, but as with it, the direction of the calyx *when in fruit* is not ascertained. In Mr. Sidebotham's plant the panicle is somewhat larger and more branched, by which it more nearly approaches the Isle of Wight or typical plant, while the prickles of that part are somewhat larger. A suberect form, similar to that noticed below (*Obs. 3.*), was sent with it from the same place. Another plant, kindly sent to me by the Rev. A. Bloxam, by whom it was gathered near Twycross, Leicestershire, in company with Mr. E. Lees, and named by the latter gentleman "*R. amplificatus* (Lees)," is also a probable variety of *R. Salteri*. It differs from the typical specimens by having linear stipules; the petioles and midribs with more numerous and stronger prickles; the flowering-shoot with much stronger and more numerous hooked prickles, and leaves ashly beneath; panicle with rather numerous and very strong hooked prickles, its branches nearly all axillary short few-flowered corymbose from ternate leaves, the uppermost leaf simple lanceolate; end of the panicle leafless, corymbose, terminal flower shortly stalked; the fruit smaller with a patent (?) calyx. This plant

does not agree with specimens of *R. amplificatus* received from Mr. Lees himself, which are very nearly allied to *R. macrophyllus*.

Obs. 3. A form of this plant occurs in Apse Castle Wood, in a dense shade, similar to that mentioned by Dr. Bell Salter as his *β. frustratus* of *R. Wahlbergii* (Ann. Nat. Hist. xvi. 371); it is suberect with flaccid leaves and abortive flowers. This is a state of arrested development. He is of opinion that this state of the plants should be considered as a recognised variety, for the reason that it is a permanent form, he having noticed it unchanged in the same situation for many years. Its identity with the fully-developed form described above is proved, not merely by transition states, but by a plant of the erect and abortive form having acquired the normal condition since it has been removed into a garden. A similar state is found in *R. discolor* in more exposed places. I observed this latter plant in that state on ditch-banks near Cambridge in the autumn of 1845.

7. *R. tenuis* (Bell Salt. !); caule procumbente tereti glabro, *aculeis deflexis* æqualibus validis, *foliis ternatis* rarius quinatis subglabris *subtus viridibus pubescentibusque*, foliolo terminali obovato-acuminato, panicula decomposita, *sepalis lanceolato-acuminatis* fructui parvo (nigro) drupeolis paucis magnis composito *adpressis*.

R. tenuis, Bell Salt. in Ann. Nat. Hist. xv. 305.

R. affinis δ, *Rub. Germ.* t. 3 b.

β. ferox (Bell Salt. !); *aculeis crebris uncinatis*.

Whole plant much resembling *R. cæsius*, from which it differs by its stout equal and not straight prickles and total want of hairs and setæ on the barren stems, and the stronger prickles on its panicle. From *R. corylifolius* it may be known by the strongly hooked prickles on its petioles, almost constantly ternate leaves, and longer and adpressed sepals.

South of England. July and August.

8. *R. corylifolius* (Sm. !); caule decurvo vel procumbente teretiusculo glabro, *aculeis conicis rectis tenuibus*, *foliis quinatis* planis marginem versus undulatis subcoriaceis *subtus mollibus canisque*, foliolo terminali rotundato-ovato cordatove, *infimis subsessilibus intermediis incumbentibus*, panicula subcorymbosa, *sepalis ovatis* a fructu reflexis.

R. corylifolius, Sm. *Fl. Br.* 542; *Eng. Bot.* 827; *Arrh. Rub. Suec.* 16; *Bab. Man.* 95.

R. affinis, *Bab. Man.* 93.

Stems long, usually glabrous. Prickles moderate, those of the petioles nearly straight. Lower branches of the panicle often elongated and spreading. "Torus roundish-clavate." Fruit sometimes rather hairy.

Hedges and thickets, common. July and August.

Obs. 1. I am now quite convinced that the common English plant is not *R. affinis* (W. and N.), and also that it is the *R. corylifolius* (Sm.), and have therefore removed the former name from our list and employed Smith's nomenclature. The *R. affinis* (W. and N.) appears to have its basal leaflets very decidedly stalked, the prickles of its barren shoot much stronger than in *R. corylifolius* and deflexed, and that shoot much more angular. In *R. corylifolius* the shoots might often be called round, never truly angular.

Obs. 2. Dr. Bell Salter noticed a plant at Selborne (Phyt. ii. 100) which he considers the typical plant of the *R. affinis* of the 'Rub. Germ.'; of this I possess only an imperfect specimen which does not seem to differ from the common form of this species, and certainly is not the *R. affinis* (W. and N.).

Obs. 3. Plants are occasionally found resembling, and probably referable to, *R. corylifolius*, which differ by having more angular stems and much stronger and deflexed prickles. I was once disposed to consider these as *R. affinis* (W. and N.), but their close similarity to *R. corylifolius* and the decidedly stalked basal leaflets of the plant figured in the 'Rub. Germ.' have caused a change in my views. It should however be observed that a specimen from Dr. Weihe himself (Reich. Fl. Germ. exsic. 781) has the lower pair of leaflets sessile, and that in some of our plants these leaflets are very manifestly stalked. In other cases the prickles on the rather angular stems are not deflexed but declining.

Obs. 4. The panicles of plants referable to this species often differ very remarkably, not in their real structure but in appearance. In some they are narrow, short and close; in other cases the lower branches are very much elongated and spreading; but all the intermediate forms may be found. The colour of the barren stem is usually purplish-green, but sometimes it is of a rather dark purple tint.

Obs. 5. Smith, in his first description of *R. corylifolius* (Fl. Br. ii. 542), says that the calyx is inflexed, and Woodward (With. Bot. Arr. ed. 3. ii. 470) says, "bent inwards and clasping the fruit." In his later works (Eng. Bot. 827; Eng. Fl. ii. 408) Smith corrects this, stating that it is reflexed. This will probably explain the difficulty which foreign botanists have found in determining Smith's plant; and the 'Fl. Brit.' being the work most frequently in their hands will account for their so generally referring *R. corylifolius* (Sm.) to *R. nemorosus* (Hayne), *R. dumetorum* (Weihe).

[To be continued.]